AMENDMENTS TO THE CLAIMS

Please amend the claims as follows. This listing will replace all prior versions and listings of claims in the Application. Claims 1-4, 8-10, 13-16, and 19-20 have been amended.

Listing of Claims

1.   (Currently amended) A data processing system comprising:

a display device for displaying ~~at least one~~ display screen element<u>s, a positioning of each of the display screen elements on a display being variable with respect to the other display screen elements</u>;

an input device for applying a variable tactile sensation to a user ~~and generating input data based upon input from a user~~; and

a processing device for generating display screen data comprising data for each <u>of the</u> display screen element<u>s</u> and ~~a tactile sensation control pattern, the processing device~~ sending the display screen data to the display device ~~and controlling the tactile sensation applied by the input device in accordance with the tactile sensation control pattern~~;

wherein the processing device ~~receives input data from the input device,~~ <u>dynamically generates a tactile sensation control pattern that defines a force pattern associated with all of the display screen elements as a function of</u> ~~calculates a relationship between the input data and the tactile sensation in accordance with the~~ <u>an</u> arrangement of ~~at least one~~ <u>the</u> display element<u>s to be displayed</u> on the display screen at the time that the display screen data is sent to the display device and stores the ~~calculated relationship as a~~ <u>dynamically generated</u> tactile sensation control pattern<u>,</u> so that <u>subsequently</u> the tactile sensation applied to the user ~~is based upon the input data~~ <u>via the input device while the display elements are being displayed on the display screen is calculated by the processing device in accordance with the dynamically generated tactile sensation control pattern</u>.

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2.   (Currently amended) A data processing system according to Claim 1, wherein the processing unit <u>dynamically</u> connects <u>individual</u> tactile sensation patterns in accordance with the arrangement of the display elements <u>to be displayed</u> on the display screen at the time that the display screen data is sent to the display device, and stores the connected <u>individual</u> tactile sensation patterns as the <u>dynamically generated</u> tactile sensation control pattern, the <u>individual</u> tactile sensation patterns indicate the relationship between ~~the~~ input data <u>generated by the input device</u> and the tactile sensation <u>for each display element</u> and are previously determined according to the types of the display elements.

3.   (Currently amended) A data processing system according to Claim 2, wherein the display elements <u>that each have an individual tactile sensation pattern</u> comprise <u>(1)</u> display objects for accepting an operation selected by the user and <u>(2)</u> a space between the display objects, the space being a portion on the display screen where the display objects are not present.

4.   (Currently amended) A data processing system according to Claim 2, wherein the input device comprises an operation unit rotatable by the user and an actuator for applying a force to the operation unit corresponding to the direction of rotation of the operation unit,

        the <u>dynamically generated</u> tactile sensation control pattern indicates a relationship between the rotational angle of the operation unit and the force applied to the operation unit, and

        the processing device controls the force applied by the actuator in accordance with the <u>dynamically generated</u> tactile sensation control pattern.

5.   (Original) A data processing system according to Claim 2, wherein the tactile sensation applied to the user is based upon the input data from the input device which indicates the positions of the display elements within a display range.

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6.   (Original) A data processing system according to Claim 5, wherein the input device is a pointing device for inputting coordinates on the display screen.

7.   (Original) A data processing system according to Claim 5, wherein the input device is a haptic commander.

8.   (Currently amended) A method for applying a variable tactile sensation to a user through an input device, the method comprising:

generating display screen data comprising data for ~~at least one~~ display elements to be displayed within a layout on a display device, the layout of the display elements being variable;

sending the display screen data to ~~a~~ the display device;

dynamically generating a tactile sensation control pattern when the display screen data is sent to the display device, the tactile sensation control pattern (1) defining a pattern of tactile sensation associated with all of the individual display elements to be displayed within a single screen layout, and (2) being dynamically generated by calculating a relationship between input data to be received from the input device and the tactile sensation in accordance with an arrangement of ~~at least one~~ all of the display elements to be displayed within the single screen layout on a display screen ~~at the time that the display screen data is sent to~~ of the display device;

storing the ~~calculated relationship as a~~ tactile sensation control pattern dynamically generated; and

subsequently controlling the tactile sensation associated with each of the display elements displayed based upon the input data from the input device~~,~~ in accordance with the stored tactile sensation control pattern, whereby a variable tactile sensation is applied to the user through the input device.

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9.　　(Currently amended)　A method for applying a variable tactile sensation to the user through an input device according to Claim 8, wherein the tactile sensation control pattern is calculated by connecting separate tactile sensation patterns associated with individual display elements in accordance with the arrangement of the display elements to be displayed on the display screen at the time that the display screen data is sent to the display device, the separate tactile sensation patterns (1) indicating the relationship between the input data and the tactile sensation for individual display elements and (2) are previously determined according to the types of the display element.

10.　　(Currently amended)　A method for applying a variable tactile sensation to the user through an input device according to Claim 9, wherein the display elements having separate tactile sensation patterns comprise (1) display objects for accepting an operation selected by the user and (2) a space between the display objects, the space being a portion in the display screen where the display objects are not present.

11.　　(Original)　A method for applying a variable tactile sensation to the user through an input device according to Claim 9, wherein the input device comprises an operation unit rotatable by the user and an actuator for applying a force to the operation unit corresponding to the direction of rotation of the operation unit, and the tactile sensation control pattern indicates a relationship between the rotational angle of the operation unit and the force applied by the actuator.

12.　　(Original)　A method for applying a variable tactile sensation to the user through an input device according to Claim 9, wherein the tactile sensation applied to the user is based upon the input data from the input device which indicates positions of the display elements within a display range.

13.   (Currently amended) A computer program stored on a storage medium which is read and executed by a computer system comprising a display device and an input device for applying a variable tactile sensation to a user, the computer program directs the computer system to

generate display screen data comprising data for ~~at least one~~ display element<u>s to be displayed, an arrangement of the display elements being variable;</u> ~~;~~

send the display screen data to the display device~~,~~ <u>;</u>

<u>dynamically</u> calculate a relationship between input data <u>to be received</u> from the input device and the tactile sensation in accordance with ~~an~~ <u>the variable</u> arrangement of ~~at least one~~ <u>the</u> display element<u>s to be displayed</u> on a display screen at the time that the display screen data is sent to the display device, and store the <u>dynamically</u> calculated relationship as a tactile sensation control pattern, so that the tactile sensation <u>subsequently</u> ~~being~~ applied to the user <u>when the display elements are displayed on the display screen</u> is based upon the input data received from the input device~~,~~ in accordance with the tactile sensation control pattern.

14.   (Currently amended) A computer program according to Claim 13, wherein<u>, each of the display elements to be displayed has an associated individual tactile sensation pattern and</u> the computer system <u>(1) dynamically</u> connects <u>the individual</u> tactile sensation patterns in accordance with the <u>variable</u> arrangement of the display elements <u>to be displayed</u> on the display screen at the time that the display screen data is sent to the display device, and <u>(2)</u> stores the <u>dynamically</u> connected <u>individual</u> tactile sensation patterns as the tactile sensation control pattern, the <u>individual</u> tactile sensation patterns <u>(a)</u> indicate the relationship between the input data and the tactile sensation and <u>(b)</u> are previously determined according to the types of the display elements.

15.   (Currently amended) A computer program according to Claim 14, wherein the display elements that have associated individual tactile sensation patterns comprise (1) display objects for accepting an operation selected by the user and (2) a space between the display objects, the space being a portion on the display screen where the display objects are not present.

16.   (Currently amended) A computer program according to Claim 14, wherein the input device comprises an operation unit rotatable by the user and an actuator for applying a force to the operation unit corresponding to the direction of rotation of the operation unit,

the computer system dynamically stores the tactile sensation control pattern as a pattern which indicates a relationship between the rotational angle of the operation unit and the force applied to the operation unit and controls the force applied by the actuator in accordance with the tactile sensation control pattern.

17.   (Original) A computer program according to Claim 14, wherein the tactile sensation applied to the user is based upon the input data from the input device which indicates the positions of the display elements within a display range.

18.   (Original) A computer program according to Claim 17, wherein the input device is a pointing device for inputting coordinates on the display screen.

19.   (Currently amended) A storage medium which stores a computer program which is read and executed by a computer system comprising a display device and an input device for applying a variable tactile sensation to a user, wherein the computer program directs the computer system to

generate display screen data comprising data for ~~at least one~~ display element<u>s, an arrangement of the display elements being variable</u>~~,~~ <u>;</u>

send the display screen data to the display device~~,~~ <u>;</u>

<u>dynamically</u> calculate a relationship between input data <u>to be received</u> from the input device and the tactile sensation in accordance with ~~an~~ <u>the variable</u> arrangement of ~~at least one~~ <u>all of the</u> display element<u>s to be displayed</u> on a display screen at the time that the display screen data is sent to the display device~~,~~ <u>;</u>

store the <u>dynamically</u> calculated relationship as a tactile sensation control pattern~~,~~ <u>;</u> and

<u>subsequently</u> control the tactile sensation <u>associated with each display element displayed on the display screen</u> based upon the input data <u>received</u> from the input device~~,~~ in accordance with the tactile sensation control pattern.

20.   (Currently amended) A storage medium according to Claim 19, wherein the computer system <u>(1) dynamically</u> connects <u>individual</u> tactile sensation patterns<u>, each individual tactile sensation pattern being associated with a display element,</u> in accordance with the <u>variable</u> arrangement of the display elements <u>to be displayed</u> on the display screen at the time that the display screen data is sent to the display device, and <u>(2)</u> stores the <u>dynamically</u> connected <u>individual</u> tactile sensation patterns as the tactile sensation control pattern, the <u>individual</u> tactile sensation patterns <u>(a)</u> indicate the relationship between the input data and the tactile sensation and <u>(b)</u> are previously determined according to the types of the display elements.